GE Rolls-Royce
Fighter Engine Team

Press Release

Fighter Engine Team Successfully Tests Augmentor on F136

Cincinnati, Ohio –24 September 2006 - The GE Rolls-Royce Fighter Engine Team has successfully fired the augmentor on the F136 test engine for the first time as part of a testing regimen that will continue through this fall at the US Air Force testing facility in Tennessee.

The augmentor, also known as an afterburner, which provides a very rapid increase in thrust, was fired successfully to full power during tests conducted at GE test facilities in Cincinnati. Turbomachinery checkout testing will continue in Cincinnati prior to the engine being shipped to Arnold Engineering Development Center in Tennessee to simulated altitude testing.

Presently, the turbomachinery components are being validated in original F136 prototypes built by the Fighter Engine Team before the Development and Demonstration (SDD) program was formally launched in August 2005 with a $2.4 billion contract award. Using a pre-SDD prototype allows risk-reduction testing to be conducted at lower cost.

Completion of these key tests will support the Critical Design Review (CDR) in early 2008, conducted by the Joint Strike Fighter program office. During that review, every aspect of the engine design will be analyzed and evaluated in order to proceed with the building of the first full product configuration engines.

The first product configuration engine in the SDD program is expected to test in early 2009, followed by the first flight on the F-35 Lightning II aircraft in 2010.

The SDD phase is scheduled to run through 2013; the first production F136 engines are scheduled to be delivered in late 2012 for the F-35 Lightning II aircraft. This occurs during the fourth lot of F-35 aircraft production, which is very early in the overall aircraft production program.

“The augmentor tests mark another dramatic and exciting milestone in the development of the F136 engine. We’re on target and committed to executing on schedule,” said Jean Lydon-Rodgers, President of the GE Rolls-Royce Fighter Engine Team.

“The successful augmentor test demonstrates the continued dedication of the Fighter Engine Team, which is devoted to creating a high-value product for the customer,” said Mark Rhodes, Senior Vice President of the Fighter Engine Team.

About 800 engineers and technicians are engaged in the F136 program at GE Aviation’s Cincinnati, Ohio, headquarters, and at Rolls-Royce facilities in Indianapolis, Indiana; and Bristol, England.

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The F-35 is a next-generation, multi-role stealth aircraft designed to replace the AV-8B Harrier, A-10, F-16, F/A-18 Hornet and the United Kingdom's Harrier GR.7 and Sea Harrier, all of which are currently powered by GE or Rolls-Royce making them the engine powers of choice for the U.S. and U.K. militaries. Potential F-35 production for the U.S. Air Force, Navy, Marines and international customers, including the UK Royal Air Force and Royal Navy, may reach as many as 5000 to 6000 aircraft over the next 30 years.

The F136 will be fully interchangeable for the F-35. The F136 was the first F-35 engine to offer a single engine configuration for all three versions of the aircraft: STOVL for the U.S. Marine Corps and U.K. Royal Navy, Conventional Takeoff and Landing (CTOL) for the U.S. Air Force, and the Carrier Variant (CV) for the U.S. Navy.

With the infusion of best practices and improved technology, the F136 is expected to exceed requirements for maintainability, affordability, and reliability for all F-35 variants, while enhancing the ability of the U.S. services and international partners to cooperate in joint coalition operations.

Editor's notes

GE - Aviation, with responsibility for 60 percent of the F136 program, is developing the core compressor and coupled high-pressure/low-pressure turbine system components, controls and accessories, and the augmentor. Rolls-Royce, with 40 percent of the F136 program, is responsible for the front fan, combustor, stages 2 and 3 of the low-pressure turbine, and gearboxes. International participant countries are also contributing to the F136 through involvement in engine development and component manufacturing.

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